9116

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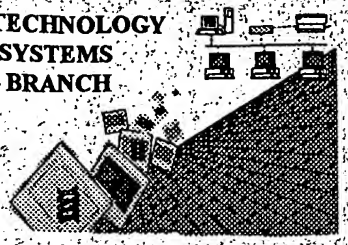
BIOTECHNOLOGY SYSTEMS BRANCH



RAW SEQUENCE LISTING ERROR REPORT

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Application Serial Number: 10/040,949
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Date Processed by STIC: 9/18/2002

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FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
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Revised 01/29/2002

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/040,949

DATE: 09/18/2002
TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
      3 <110> APPLICANT: Introgene BV
      4       Havenga, Menzo
      5       Vogels, Ronald
      7 <120> TITLE OF INVENTION: Infection with chimaeric adenoviruses of cells negative
      8       for the adenovirus serotype 5 Coxsacki adenovirus
      9       receptor (CAR)
     11 <130> FILE REFERENCE: 2183-52226US
     13 <140> CURRENT APPLICATION NUMBER: 10/040,949
C--> 14 <141> CURRENT FILING DATE: 2002-09-09
     16 <150> PRIOR APPLICATION NUMBER: WO01/04334
     17 <151> PRIOR FILING DATE: 2000-07-07
     19 <150> PRIOR APPLICATION NUMBER: EP 99202234.3
     20 <151> PRIOR FILING DATE: 1999-07-08
     22 <150> PRIOR APPLICATION NUMBER: US 60/142,557
     23 <151> PRIOR FILING DATE: 2000-07-07
     25 <160> NUMBER OF SEQ ID NOS: 58
     27 <170> SOFTWARE: PatentIn version 3.1
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Does Not Comply
Corrected Diskette Needed

errors throughout

ERRORED SEQUENCES

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     94 <210> SEQ ID NO: 5
     95 <211> LENGTH: 64
     96 <212> TYPE: DNA
     97 <213> ORGANISM: Artificial Sequence
     99 <220> FEATURE:
    100 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
    102 <220> FEATURE:
    103 <221> NAME/KEY: misc_feature
    104 <222> LOCATION: (1)..(64)
    105 <223> OTHER INFORMATION: primer LRT-2
    107 <400> SEQUENCE: 5
E--> 108 gcggatcctt cgaaccatgg taagcttggt accgctagcg ttaaccgggc
    109 gactcagtca
    111 atcg
    614 <210> SEQ ID NO: 30
    615 <211> LENGTH: 377
    616 <212> TYPE: PRT
    617 <213> ORGANISM: adenoviridae
    619 <220> FEATURE:
    620 <221> NAME/KEY: VARIANT
    621 <222> LOCATION: (1)..(377)
    622 <223> OTHER INFORMATION: Serotype 8 fiber protein
```

60
(50)
64

Move group of bases up one line. Move cumulative base total up one line.

Cumulative base total must be at right margin of each line.

p.2

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

624 <400> SEQUENCE: 30
626 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 627
1 5 10
630 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
631 20 25 30
634 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
635 35 40 45
638 Ser Ser Asn Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
639 50 55 60
642 Leu Ala Asp Pro Ile Thr Ile Asn Asn Gln Asn Val Ser Leu Lys Val
643 65 70 75 80
646 Gly Gly Gly Leu Thr Leu Gln Glu Glu Thr Gly Lys Leu Thr Val Asn
647 85 90 95
650 Thr Glu Pro Pro Leu His Leu Thr Asn Asn Lys Leu Gly Ile Ala Leu
651 100 105 110
654 Asp Ala Pro Phe Asp Val Ile Asp Asn Lys Leu Thr Leu Leu Ala Gly
655 115 120 125
658 His Gly Leu Ser Ile Ile Thr Lys Glu Thr Ser Thr Leu Pro Gly Leu
659 130 135 140
662 Val Asn Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Asp Leu
E--> 663
145 150 155
666 Ser Asn Asn Gly Gly Asn Ile Cys Val Arg Val Gly Glu Gly Gly Gly
E--> 667 165 170 175
670 Leu Ser Phe Asn Asp Asn Gly Asp Leu Val Ala Phe Asn Lys Lys Glu
E--> 671 180 185 190
674 Asp Lys Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro Asn Cys Arg
E--> 675 195 200 205
678 Ile Asp Gln Asp Lys Asp Ser Lys Leu Thr Leu Val Leu Thr Lys Cys
E--> 679 210 215 220
682 Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Ile Val Val Ala Gly Arg
E--> 683 225 230 235 240
686 Tyr Lys Ile Ile Asn Asn Asn Thr Asn Pro Ala Leu Lys Gly Phe Thr
E--> 687 245 250 255
690 Ile Lys Leu Leu Phe Asp Lys Asn Gly Val Leu Met Glu Ser Ser Asn
E--> 691 260 265 270
694 Leu Gly Lys Ser Tyr Trp Asn Phe Arg Asn Gln Asn Ser Ile Met Ser
E--> 695 275 280 285
698 Thr Ala Tyr Glu Lys Ala Ile Gly Phe Met Pro Asn Leu Val Ala Tyr
E--> 699 290 295 300
702 Pro Lys Pro Thr Thr Gly Ser Lys Lys Tyr Ala Arg Asp Ile Val Tyr
E--> 703 305 310 315 320
706 Gly Asn Ile Tyr Leu Gly Gly Lys Pro His Gln Pro Val Thr Ile Lys
E--> 707 325 330 335
710 Thr Thr Phe Asn Gln Glu Thr Gly Cys Glu Tyr Ser Ile Thr Phe Asp
E--> 711 340 345 350
714 Phe Ser Trp Ala Lys Thr Tyr Val Asn Val Glu Phe Glu Thr Thr Ser
E--> 715 355 360 365
718 Phe Thr Phe Ser Tyr Ile Ala Gln Glu
E--> 719 370 375

misabgned amino acid numbers see item 3 on Error Summary Sheet.

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

721 <210> SEQ ID NO: 31
722 <211> LENGTH: 377
723 <212> TYPE: PRT
724 <213> ORGANISM: adenoviridae
727 <220> FEATURE:
728 <221> NAME/KEY: VARIANT
729 <222> LOCATION: (1)..(377)
730 <223> OTHER INFORMATION: Serotype 9 fiber protein
732 <400> SEQUENCE: 31
734 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 735
1 5 10
738 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
739 20 25 30
742 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
743 35 40 45
746 Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
747 50 55 60
750 Leu Ala Asp Pro Ile Ala Ile Val Asn Gly Asn Val Ser Leu Lys Val
751 65 70 75 80
754 Gly Gly Gly Leu Thr Leu Gln Asp Gly Thr Gly Lys Leu Thr Val Asn
755 85 90 95
758 Ala Asp Pro Pro Leu Gln Leu Thr Asn Asn Lys Leu Gly Ile Ala Leu
759 100 105 110
762 Asp Ala Pro Phe Asp Val Ile Asp Asn Lys Leu Thr Leu Leu Ala Gly
763 115 120 125
766 His Gly Leu Ser Ile Ile Thr Lys Glu Thr Ser Thr Leu Pro Gly Leu
767 130 135 140
770 Ile Asn Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Glu Ser
771 145 150 155 160
774 Thr Asp Asn Gly Gly Ser Val Cys Val Arg Val Gly Glu Gly Gly Gly
775 165 170 175
778 Leu Ser Phe Asn Asn Asp Gly Asp Leu Val Ala Phe Asn Lys Lys Glu
779 180 185 190
782 Asp Lys Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro Asn Cys Lys
783 195 200 205
786 Ile Asp Gln Asp Lys Asp Ser Lys Leu Thr Leu Val Leu Thr Lys Cys
787 210 215 220
790 Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Ile Val Val Ala Gly Lys
791 225 230 235 240
794 Tyr Lys Ile Ile Asn Asn Asn Thr Gln Pro Ala Leu Lys Gly Phe Thr
795 245 250 255
798 Ile Lys Leu Leu Phe Asp Glu Asn Gly Val Leu Met Glu Ser Ser Asn
799 260 265 270
802 Leu Gly Lys Ser Tyr Trp Asn Phe Arg Asn Glu Asn Ser Ile Met Ser
803 275 280 285
806 Thr Ala Tyr Glu Lys Ala Ile Gly Phe Met Pro Asn Leu Val Ala Tyr
807 290 295 300
810 Pro Lys Pro Thr Ala Gly Ser Lys Lys Tyr Ala Arg Asp Ile Val Tyr
811 305 310 315 320

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
814 Gly Asn Ile Tyr Leu Gly Gly Lys Pro Asp Gln Pro Val Thr Ile Lys
815                 325                 330                 335
818 Thr Thr Phe Asn Gln Glu Thr Gly Cys Glu Tyr Ser Ile Thr Phe Asp
819             340                 345                 350
822 Phe Ser Trp Ala Lys Thr Tyr Val Asn Val Glu Phe Glu Thr Thr Ser
823         355                 360                 365
826 Phe Thr Phe Ser Tyr Ile Ala Gln Glu
827     370                 375
829 <210> SEQ ID NO: 32
830 <211> LENGTH: 391
831 <212> TYPE: PRT
832 <213> ORGANISM: adenoviridae
834 <220> FEATURE:
835 <221> NAME/KEY: VARIANT
836 <222> LOCATION: (1)..(391)
837 <223> OTHER INFORMATION: Serotype 13 fiber protein
839 <220> FEATURE:
840 <221> NAME/KEY: MISC_FEATURE
841 <222> LOCATION: (1)..(5)
842 <223> OTHER INFORMATION: 'Xaa' at positions 1-5 indicates an unidentified amino
843       acid due to unidentified nucleotide(s)
845 <220> FEATURE:
846 <221> NAME/KEY: MISC_FEATURE
847 <222> LOCATION: (23)
848 <223> OTHER INFORMATION: 'Xaa' at position 23 indicates an unidentified amino acid
849       due to unidentified nucleotide(s)
851 <220> FEATURE:
852 <221> NAME/KEY: MISC_FEATURE
853 <222> LOCATION: (41)
854 <223> OTHER INFORMATION: 'Xaa' at position 41 indicates an unidentified amino acid
855       due to unidentified nucleotide(s)
857 <220> FEATURE:
858 <221> NAME/KEY: MISC_FEATURE
859 <222> LOCATION: (43)
860 <223> OTHER INFORMATION: 'Xaa' at position 43 indicates an unidentified amino acid
861       due to unidentified nucleotide(s)
863 <220> FEATURE:
864 <221> NAME/KEY: MISC_FEATURE
865 <222> LOCATION: (49)
866 <223> OTHER INFORMATION: 'Xaa' at position 49 indicates an unidentified amino acid
867       due to unidentified nucleotide(s)
869 <220> FEATURE:
870 <221> NAME/KEY: MISC_FEATURE
871 <222> LOCATION: (385)
872 <223> OTHER INFORMATION: 'Xaa' at position 385 indicates an unidentified amino acid
873       due to unidentified nucleotide(s)
875 <400> SEQUENCE: 32
W--> 877 Xaa Xaa Xaa Xaa Xaa Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 878
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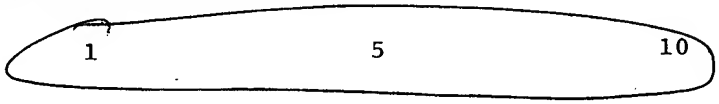

same error

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
W--> 881 Lys Arg Ala Arg Ser Ser Xaa Asp Thr Phe Asn Pro Val Tyr Pro Tyr
     882                 20                  25                  30
W--> 885 Gly Tyr Ala Arg Asn Gln Asn Ile Xaa Phe Xaa Thr Pro Pro Phe Val
     886             35                  40                  45
W--> 889 Xaa Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
     890         50                  55                  60
     893 Leu Ala Asp Pro Ile Thr Ile Ala Asn Gly Asp Val Ser Leu Lys Val
     894 65                  70                  75                  80
     897 Gly Gly Gly Leu Thr Leu Gln Glu Gly Ser Leu Thr Val Asp Pro Lys
     898                 85                  90                  95
     901 Ala Pro Leu Gln Leu Ala Asn Asp Lys Lys Leu Glu Leu Val Tyr Asp
     902                 100                 105                 110
     905 Asp Pro Phe Glu Val Ser Thr Asn Lys Leu Ser Leu Lys Val Gly His
     906             115                 120                 125
     909 Gly Leu Lys Val Leu Asp Asp Lys Ser Ala Gly Gly Leu Lys Asp Leu
     910         130                 135                 140
     913 Ile Gly Lys Leu Val Val Leu Thr Gly Lys Gly Ile Gly Ile Glu Asn
     914 145                 150                 155                 160
     917 Leu Gln Asn Asp Asp Gly Ser Ser Arg Gly Val Gly Ile Asn Val Arg
     918                 165                 170                 175
     921 Leu Gly Thr Asp Gly Gly Leu Ser Phe Asp Arg Lys Gly Glu Leu Val
     922                 180                 185                 190
     925 Ala Trp Asn Arg Lys Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp
     926             195                 200                 205
     929 Pro Ser Pro Asn Cys Lys Ala Glu Thr Glu Lys Asp Ser Lys Leu Thr
     930         210                 215                 220
     933 Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Thr Val Ser Ile
     934 225                 230                 235                 240
     937 Ile Val Leu Lys Gly Lys Tyr Glu Phe Val Lys Lys Glu Thr Glu Pro
     938                 245                 250                 255
     941 Lys Ser Phe Asp Val Lys Leu Leu Phe Asp Ser Lys Gly Val Leu Leu
     942                 260                 265                 270
     945 Pro Thr Ser Asn Leu Ser Lys Glu Tyr Trp Asn Tyr Arg Ser Tyr Asp
     946             275                 280                 285
     949 Asn Asn Ile Gly Thr Pro Tyr Glu Asn Ala Val Pro Phe Met Pro Asn
     950         290                 295                 300
     953 Leu Lys Ala Tyr Pro Lys Pro Thr Lys Thr Ala Ser Asp Lys Ala Glu
     954 305                 310                 315                 320
     957 Asn Lys Ile Ser Ser Ala Lys Asn Lys Ile Val Ser Asn Phe Tyr Phe
     958                 325                 330                 335
     961 Gly Gly Gln Ala Tyr Gln Pro Gly Thr Ile Ile Ile Lys Phe Asn Glu
     962                 340                 345                 350
     965 Glu Ile Asp Glu Thr Cys Ala Tyr Ser Ile Thr Phe Asn Phe Gly Trp
     966             355                 360                 365
     969 Gly Lys Val Tyr Asp Asn Pro Phe Pro Phe Asp Thr Thr Ser Phe Thr
     970         370                 375                 380
W--> 973 Xaa Ser Tyr Ile Ala Gln Glu
     974 385                 390
     976 <210> SEQ ID NO: 33
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RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

977 <211> LENGTH: 290
978 <212> TYPE: PRT
979 <213> ORGANISM: adenoviridae
981 <220> FEATURE:
982 <221> NAME/KEY: VARIANT
983 <222> LOCATION: (1)..(290)
984 <223> OTHER INFORMATION: Serotype 14 fiber protein
986 <400> SEQUENCE: 33
988 His Pro Phe Ile Asn Pro Gly Phe Ile Ser Pro Asn Gly Phe Thr Gln
E--> 989
1 5 10
992 Ser Pro Asp Gly Val Leu Thr Leu Lys Cys Leu Thr Pro Leu Thr Thr
993 20 25 30
996 Thr Gly Gly Ser Leu Gln Leu Lys Val Gly Gly Gly Leu Thr Val Asp
997 35 40 45
1000 Asp Thr Asp Gly Thr Leu Gln Glu Asn Ile Gly Ala Thr Thr Pro Leu
1001 50 55 60
1004 Val Lys Thr Gly His Ser Ile Gly Leu Ser Leu Gly Ala Gly Leu Gly
1005 65 70 75 80
1008 Thr Asp Glu Asn Lys Leu Cys Thr Lys Leu Gly Glu Gly Leu Thr Phe
1009 85 90 95
1012 Asn Ser Asn Asn Ile Cys Ile Asp Asp Asn Ile Asn Thr Leu Trp Thr
1013 100 105 110
1016 Gly Val Asn Pro Thr Glu Ala Asn Cys Gln Met Met Asp Ser Ser Glu
1017 115 120 125
1020 Ser Asn Asp Cys Lys Leu Ile Leu Thr Leu Val Lys Thr Gly Ala Leu
1021 130 135 140
1024 Val Thr Ala Phe Val Tyr Val Ile Gly Val Ser Asn Asn Phe Asn Met
1025 145 150 155 160
1028 Leu Thr Thr Tyr Arg Asn Ile Asn Phe Thr Ala Glu Leu Phe Phe Asp
1029 165 170 175
1032 Ser Ala Gly Asn Leu Leu Thr Ser Leu Ser Ser Leu Lys Thr Pro Leu
1033 180 185 190
1036 Asn His Lys Ser Gly Gln Thr Trp Leu Leu Val Pro Leu Leu Met Leu
1037 195 200 205
1040 Lys Val Ser Cys Pro Ala Gln Leu Leu Ile Leu Ser Ile Ile Ile Leu
1041 210 215 220
1045 Glu Lys Asn Lys Thr Thr Phe Thr Glu Leu Val Thr Thr Gln Leu Val
1046 225 230 235 240
1049 Ile Thr Leu Leu Phe Pro Leu Thr Ile Ser Val Met Leu Asn Gln Arg
1050 245 250 255
1053 Ala Ile Arg Ala Asp Thr Ser Tyr Cys Ile Arg Ile Thr Trp Ser Trp
1054 260 265 270
1057 Asn Thr Gly Asp Ala Pro Glu Gly Gln Thr Ser Ala Thr Thr Leu Val
1058 275 280 285
1061 Thr Ser
1062 290
1064 <210> SEQ ID NO: 34
1065 <211> LENGTH: 345
1066 <212> TYPE: PRT

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

1067 <213> ORGANISM: adenoviridae
1069 <220> FEATURE:
1070 <221> NAME/KEY: VARIANT
1071 <222> LOCATION: (1)..(345)
1072 <223> OTHER INFORMATION: Serotype 20 fiber protein
1074 <400> SEQUENCE: 34
1076 Ile Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly
E--> 1077
1 5 10
1080 Leu Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro
1081 20 25 30
1084 Ile Ala Ile Val Asn Gly Asn Val Ser Leu Lys Val Gly Gly Gly Ile
1085 35 40 45
1088 Thr Val Glu Gln Asp Ser Gly Gln Leu Ile Ala Asn Pro Lys Ala Pro
1089 50 55 60
1092 Leu Gln Val Ala Asn Asp Lys Leu Glu Leu Ser Tyr Ala Tyr Pro Phe
1093 65 70 75 80
1096 Glu Thr Ser Ala Asn Lys Leu Ser Leu Lys Val Gly Gln Gly Leu Lys
1097 85 90 95
1100 Val Leu Asp Glu Lys Asp Ser Gly Gly Leu Gln Asn Leu Leu Gly Lys
1101 100 105 110
1104 Leu Val Val Leu Thr Gly Lys Gly Ile Gly Val Glu Glu Leu Lys Asn
1105 115 120 125
1108 Pro Asp Asn Thr Asn Arg Gly Val Gly Ile Asn Val Arg Leu Gly Lys
1109 130 135 140
1112 Asp Gly Gly Leu Ser Phe Asn Lys Asn Gly Glu Leu Val Ala Trp Asn
1113 145 150 155 160
1116 Lys His Asn Asp Thr Gly Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro
1117 165 170 175
1120 Asn Cys Lys Ile Glu Glu Val Lys Asp Ser Lys Leu Thr Leu Val Leu
1121 180 185 190
1124 Thr Lys Cys Gly Ser Gln Ile Leu Ala Thr Met Ala Phe Gln Val Val
1125 195 200 205
1128 Lys Gly Thr Tyr Glu Asn Ile Ser Lys Asn Thr Ala Lys Asn Ser Phe
1129 210 215 220
1132 Ser Ile Lys Leu Leu Phe Asp Asp Asn Gly Lys Leu Leu Glu Gly Ser
1133 225 230 235 240
1136 Ser Leu Asp Lys Asp Tyr Trp Asn Phe Arg Ser Asp Asp Ser Ile Ile
1137 245 250 255
1140 Pro Asn Gln Tyr Asp Asn Ala Val Pro Phe Met Pro Asn Leu Lys Ala
1141 260 265 270
1144 Tyr Pro Lys Pro Ser Thr Val Leu Pro Ser Thr Asp Lys Asn Ser Asn
1145 275 280 285
1148 Gly Lys Asn Thr Ile Val Ser Asn Leu Tyr Leu Glu Gly Lys Ala Tyr
1149 290 295 300
1152 Gln Pro Val Ala Val Thr Ile Thr Phe Asn Lys Glu Ile Gly Cys Thr
1153 305 310 315 320
1156 Tyr Ser Ile Thr Phe Asp Phe Gly Trp Ala Lys Thr Tyr Asp Val Pro
1157 325 330 335
1160 Ile Pro Phe Asp Ser Ser Ser Phe Thr

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

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1161              340                 345
1163 <210> SEQ ID NO: 35
1164 <211> LENGTH: 346
1165 <212> TYPE: PRT
1166 <213> ORGANISM: adenoviridae
1168 <220> FEATURE:
1169 <221> NAME/KEY: VARIANT
1170 <222> LOCATION: (1)..(346)
1171 <223> OTHER INFORMATION: Serotype 23 fiber protein
1173 <400> SEQUENCE: 35
1175 Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe
E--> 1176
                                                    1               5              10
1179 Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile
1180             20                  25                  30
1183 Ala Ile Thr Asn Gly Asp Val Ser Leu Lys Val Gly Gly Gly Leu Thr
1184         35                  40                  45
1187 Val Glu Gln Asp Ser Gly Asn Leu Lys Val Asn Thr Lys Ala Pro Leu
1188     50                  55                  60
1191 Gln Val Ala Ala Asp Lys Gln Leu Glu Ile Ala Leu Ala Asp Pro Phe
1192 65                  70                  75                  80
1195 Glu Val Ser Lys Gly Arg Leu Gly Ile Lys Ala Gly His Gly Leu Lys
1196                 85                  90                  95
1199 Val Ile Asp Asn Ser Ile Ser Gly Leu Glu Gly Leu Val Gly Thr Leu
1200             100                 105                 110
1203 Val Val Leu Thr Gly His Gly Ile Gly Thr Glu Asn Leu Leu Asn Asn
1204         115                 120                 125
1207 Asp Gly Ser Ser Arg Gly Val Gly Ile Asn Val Arg Leu Gly Lys Asp
1208     130                 135                 140
1211 Gly Gly Leu Ser Phe Asp Lys Lys Gly Asp Leu Val Ala Trp Asn Lys
1212 145                 150                 155                 160
1215 Lys Tyr Asp Thr Arg Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn
1216                 165                 170                 175
1219 Cys Lys Val Ile Glu Ala Lys Asp Ser Lys Leu Thr Leu Val Leu Thr
1220             180                 185                 190
1223 Lys Cys Gly Ser Gln Ile Leu Ala Asn Met Ser Leu Leu Ile Leu Lys
1224         195                 200                 205
1227 Gly Thr Tyr Glu Tyr Ile Ser Asn Ala Ile Ala Asn Lys Ser Phe Thr
1228     210                 215                 220
1231 Ile Lys Leu Leu Phe Asn Asp Lys Gly Val Leu Met Asp Gly Ser Ser
1232 225                 230                 235                 240
1235 Leu Asp Lys Asp Tyr Trp Asn Tyr Lys Ser Asp Asp Ser Val Met Ser
1236                 245                 250                 255
1239 Lys Ala Tyr Glu Asn Ala Val Pro Phe Met Pro Asn Leu Lys Ala Tyr
1240             260                 265                 270
1243 Pro Asn Pro Thr Thr Ser Thr Thr Asn Pro Ser Thr Asp Lys Lys Ser
1244         275                 280                 285
1247 Asn Gly Lys Asn Ala Ile Val Ser Asn Val Tyr Leu Glu Gly Arg Ala
1248     290                 295                 300
1251 Tyr Gln Pro Val Ala Ile Thr Ile Thr Phe Asn Lys Glu Thr Gly Cys
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RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

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1252 305                 310                 315                 320
1255 Thr Tyr Ser Met Thr Phe Asp Phe Gly Trp Ser Lys Val Tyr Asn Asp
1256                 325                 330                 335
1259 Pro Ile Pro Phe Asp Thr Ser Ser Leu Thr
1260             340                 345
1262 <210> SEQ ID NO: 36
1263 <211> LENGTH: 390
1264 <212> TYPE: PRT
1265 <213> ORGANISM: adenoviridae
1267 <220> FEATURE:
1268 <221> NAME/KEY: VARIANT
1269 <222> LOCATION: (1)..(390)
1270 <223> OTHER INFORMATION: Serotype 24 fiber protein
1273 <400> SEQUENCE: 36
1275 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 1276                                    1                   5                  10
1279 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
1280             20                  25                  30
1283 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
1284         35                  40                  45
1287 Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
1288     50                  55                  60
1291 Leu Ala Asp Pro Ile Ala Ile Thr Asn Gly Asp Val Ser Leu Lys Val
1292 65                  70                  75                  80
1295 Gly Gly Gly Leu Thr Val Glu Lys Asp Ser Gly Asn Leu Lys Val Asn
1296                 85                  90                  95
1299 Pro Lys Ala Pro Leu Gln Val Thr Thr Asp Lys Gln Leu Glu Ile Ala
1300             100                 105                 110
1303 Leu Ala Tyr Pro Phe Glu Val Ser Asn Gly Lys Leu Gly Ile Lys Ala
1304         115                 120                 125
1307 Gly His Gly Leu Lys Val Ile Asp Lys Ile Ala Gly Leu Glu Gly Leu
1308     130                 135                 140
1311 Ala Gly Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Glu Asn
1312 145                 150                 155                 160
1315 Leu Glu Asn Ser Asp Gly Ser Ser Arg Gly Val Gly Ile Asn Val Arg
1316                 165                 170                 175
1319 Leu Ala Lys Asp Gly Gly Leu Ser Phe Asp Lys Lys Gly Asp Leu Val
1320             180                 185                 190
1323 Ala Trp Asn Lys His Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp
1324         195                 200                 205
1327 Pro Ser Pro Asn Cys Thr Ile Asp Gln Glu Arg Asp Ser Lys Leu Thr
1328     210                 215                 220
1331 Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser Leu
1332 225                 230                 235                 240
1335 Leu Val Val Lys Gly Lys Phe Ser Asn Ile Asn Asn Asn Thr Asn Pro
1336                 245                 250                 255
1339 Thr Asp Lys Lys Ile Thr Val Lys Leu Leu Phe Asn Glu Lys Gly Val
1340             260                 265                 270
1343 Leu Met Asp Ser Ser Thr Leu Lys Lys Glu Tyr Trp Asn Tyr Arg Asn
```

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PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
1344          275                 280                 285
1347 Asp Asn Ser Thr Val Ser Gln Ala Tyr Asp Asn Ala Val Pro Phe Met
1348      290                 295                 300
1351 Pro Asn Ile Lys Ala Tyr Pro Lys Pro Thr Thr Asp Thr Ser Ala Lys
1352 305                 310                 315                 320
1355 Pro Glu Asp Lys Lys Ser Ala Ala Lys Arg Tyr Ile Val Ser Asn Val
1356                 325                 330                 335
1359 Tyr Ile Gly Gly Leu Pro Asp Lys Thr Val Val Ile Thr Ile Lys Phe
1360             340                 345                 350
1363 Asn Ala Glu Thr Glu Cys Ala Tyr Ser Ile Thr Phe Glu Phe Thr Trp
1364          355                 360                 365
1367 Ala Lys Thr Phe Glu Asp Val Gln Phe Asp Ser Ser Ser Phe Thr Phe
1368      370                 375                 380
1371 Ser Tyr Ile Ala Gln Glu
1372 385                 390
1374 <210> SEQ ID NO: 37
1375 <211> LENGTH: 375
1376 <212> TYPE: PRT
1377 <213> ORGANISM: adenoviridae
1379 <220> FEATURE:
1380 <221> NAME/KEY: VARIANT
1381 <222> LOCATION: (1)..(375)
1382 <223> OTHER INFORMATION: Serotype 25 fiber protein
1384 <220> FEATURE:
1385 <221> NAME/KEY: MISC_FEATURE
1386 <222> LOCATION: (141)
1387 <223> OTHER INFORMATION: 'Xaa' at position 41 indicates an unidentified amino acid
1388       due to unidentified nucleotide(s)
1390 <400> SEQUENCE: 37
1392 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 1393                                    1               5                  10
1396 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
1397              20                  25                  30
1400 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
1401          35                  40                  45
1404 Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
1405      50                  55                  60
1408 Leu Ala Asp Pro Ile Thr Ile Ser Asn Gly Asp Val Ser Leu Lys Val
1409 65                  70                  75                  80
1412 Gly Gly Gly Leu Thr Val Glu Gln Asp Ser Gly Asn Leu Ser Val Asn
1413                 85                  90                  95
1416 Pro Lys Ala Pro Leu Gln Val Gly Thr Asp Lys Lys Leu Glu Leu Ala
1417             100                 105                 110
1420 Leu Ala Pro Pro Phe Asn Val Lys Asp Asn Lys Leu Asp Leu Leu Val
1421          115                 120                 125
1424 Gly Asp Gly Leu Lys Val Ile Asp Lys Ser Ile Ser Xaa Leu Pro Gly
1425      130                 135                 140
1428 Leu Leu Asn Tyr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Asn Glu
1429 145                 150                 155                 160
```

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PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
1432 Glu Leu Lys Asn Asp Asp Gly Ser Asn Lys Gly Val Gly Leu Cys Val
1433                 165                 170                 175
1436 Arg Ile Gly Glu Gly Gly Gly Leu Thr Phe Asp Asp Lys Gly Tyr Leu
1437             180                 185                 190
1440 Val Ala Trp Asn Lys Lys His Asp Ile Arg Thr Leu Trp Thr Thr Leu
1441         195                 200                 205
1444 Asp Pro Ser Pro Asn Cys Arg Ile Asp Val Asp Lys Asp Ser Lys Leu
1445     210                 215                 220
1448 Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser
1449 225                 230                 235                 240
1452 Leu Leu Val Val Lys Gly Arg Phe Gln Asn Leu Asn Tyr Lys Thr Asn
1453                 245                 250                 255
1456 Pro Asn Leu Pro Lys Thr Phe Thr Ile Lys Leu Leu Phe Asp Glu Asn
1457             260                 265                 270
1460 Gly Ile Leu Lys Asp Ser Ser Asn Leu Asp Lys Asn Tyr Trp Asn Tyr
1461         275                 280                 285
1464 Arg Asn Gly Asn Ser Ile Leu Ala Glu Gln Tyr Lys Asn Ala Val Gly
1465     290                 295                 300
1468 Phe Met Pro Asn Leu Ala Ala Tyr Pro Lys Ser Thr Thr Thr Gln Ser
1469 305                 310                 315                 320
1472 Lys Leu Tyr Ala Arg Asn Thr Ile Phe Gly Asn Ile Tyr Leu Asp Ser
1473                 325                 330                 335
1476 Gln Ala Tyr Asn Pro Val Val Ile Lys Ile Thr Phe Asn Gln Glu Ala
1477             340                 345                 350
1480 Asp Ser Ala Tyr Ser Ile Thr Leu Asn Tyr Ser Trp Gly Lys Asp Tyr
1481         355                 360                 365
1484 Glu Asn Ile Pro Phe Asp Ser
1485     370                 375
1487 <210> SEQ ID NO: 38
1488 <211> LENGTH: 335
1489 <212> TYPE: PRT
1490 <213> ORGANISM: adenoviridae
1492 <220> FEATURE:
1493 <221> NAME/KEY: VARIANT
1494 <222> LOCATION: (1)..(335)
1495 <223> OTHER INFORMATION: Serotype 27 fiber protein
1497 <400> SEQUENCE: 38
1499 Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe Lys Asn
E--> 1500
                                    1                   5                  10
1503 Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile Thr Ile
1504             20                  25                  30
1507 Thr Asn Gly Asp Val Ser Leu Lys Val Gly Gly Gly Leu Val Val Glu
1508         35                  40                  45
1511 Lys Glu Ser Gly Lys Leu Ser Val Asp Pro Lys Thr Pro Leu Gln Val
1512     50                  55                  60
1515 Ala Ser Asp Asn Lys Leu Glu Leu Ser Tyr Asn Ala Pro Phe Lys Val
1516 65                  70                  75                  80
1519 Glu Asn Asp Lys Leu Ser Leu Asp Val Gly His Gly Leu Lys Val Ile
1520                 85                  90                  95
```

same

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
1523 Gly Asn Glu Val Ser Ser Leu Pro Gly Leu Ile Asn Lys Leu Val Val
1524             100                 105                 110
1527 Leu Thr Gly Lys Gly Ile Gly Thr Glu Glu Leu Lys Glu Gln Asn Ser
1528         115                 120                 125
1531 Asp Lys Ile Ile Gly Val Gly Ile Asn Val Arg Ala Arg Gly Gly Leu
1532     130                 135                 140
1535 Ser Phe Asp Asn Asp Gly Tyr Leu Val Ala Trp Asn Pro Lys Tyr Asp
1536 145                 150                 155                 160
1539 Thr Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro Asn Cys Lys Met
1540                 165                 170                 175
1543 Leu Thr Lys Lys Asp Ser Lys Leu Thr Leu Thr Leu Thr Lys Cys Gly
1544             180                 185                 190
1547 Ser Gln Ile Leu Gly Asn Val Ser Leu Leu Ala Val Ser Gly Lys Tyr
1548         195                 200                 205
1551 Leu Asn Met Thr Lys Asp Glu Thr Gly Val Lys Ile Ile Leu Leu Phe
1552     210                 215                 220
1555 Asp Arg Asn Gly Val Leu Met Gln Glu Ser Ser Leu Asp Lys Glu Tyr
1556 225                 230                 235                 240
1559 Trp Asn Tyr Arg Asn Asp Asn Asn Val Ile Gly Thr Pro Tyr Glu Asn
1560                 245                 250                 255
1563 Ala Val Gly Phe Met Pro Asn Leu Val Ala Tyr Pro Lys Pro Thr Ser
1564             260                 265                 270
1567 Ala Asp Ala Lys Asn Tyr Ser Arg Ser Lys Ile Ile Ser Asn Val Tyr
1568         275                 280                 285
1571 Leu Lys Gly Leu Ile Tyr Gln Pro Val Ile Ile Ile Ala Ser Phe Asn
1572     290                 295                 300
1575 Gln Glu Thr Thr Asn Gly Cys Val Tyr Ser Ile Ser Phe Asp Phe Thr
1576 305                 310                 315                 320
1579 Cys Ser Lys Asp Tyr Thr Gly Gln Gln Phe Asp Val Thr Ser Phe
1580                 325                 330                 335
1582 <210> SEQ ID NO: 39
1583 <211> LENGTH: 374
1584 <212> TYPE: PRT
1585 <213> ORGANISM: adenoviridae
1589 <220> FEATURE:
1590 <221> NAME/KEY: VARIANT
1591 <222> LOCATION: (1)..(374)
1592 <223> OTHER INFORMATION: Serotype 28 fiber protein
1594 <400> SEQUENCE: 39
1596 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 1597
                                     1                   5                  10
1600 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
1601             20                  25                  30
1604 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
1605         35                  40                  45
1608 Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
1609     50                  55                  60
1612 Leu Ala Asp Pro Ile Thr Ile Ala Asn Gly Asp Val Ser Leu Lys Leu
1613 65                  70                  75                  80
```

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PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
1616 Gly Gly Gly Leu Thr Val Glu Lys Glu Ser Gly Asn Leu Thr Val Asn
1617                 85                  90                  95
1620 Pro Lys Ala Pro Leu Gln Val Ala Ser Gly Gln Leu Glu Leu Ala Tyr
1621             100                 105                 110
1624 Tyr Ser Pro Phe Asp Val Lys Asn Asn Met Leu Thr Leu Lys Ala Gly
1625         115                 120                 125
1628 His Gly Leu Ala Val Val Thr Lys Asp Asn Thr Asp Leu Gln Pro Leu
1629     130                 135                 140
1632 Met Gly Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Gly Thr
1633 145                 150                 155                 160
1636 Ser Ala His Gly Gly Thr Ile Asp Val Arg Ile Gly Lys Asn Gly Ser
1637                 165                 170                 175
1640 Leu Ala Phe Asp Lys Asn Gly Asp Leu Val Ala Trp Asp Lys Glu Asn
1641             180                 185                 190
1644 Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro Asn Cys Lys
1645         195                 200                 205
1648 Met Ser Glu Val Lys Asp Ser Lys Leu Thr Leu Ile Leu Thr Lys Cys
1649     210                 215                 220
1652 Gly Ser Gln Ile Leu Gly Ser Val Ser Leu Leu Ala Val Lys Gly Glu
1653 225                 230                 235                 240
1656 Tyr Gln Asn Met Thr Ala Ser Thr Asn Lys Asn Val Lys Ile Thr Leu
1657                 245                 250                 255
1660 Leu Phe Asp Ala Asn Gly Val Leu Leu Glu Gly Ser Ser Leu Asp Lys
1661             260                 265                 270
1664 Glu Tyr Trp Asn Phe Arg Asn Asn Asp Ser Thr Val Ser Gly Lys Tyr
1665         275                 280                 285
1668 Glu Asn Ala Val Pro Phe Met Pro Asn Ile Thr Ala Tyr Lys Pro Val
1669     290                 295                 300
1672 Asn Ser Lys Ser Tyr Ala Arg Ser His Ile Phe Gly Asn Val Tyr Ile
1673 305                 310                 315                 320
1676 Asp Ala Lys Pro Tyr Asn Pro Val Val Ile Lys Ile Ser Phe Asn Gln
1677                 325                 330                 335
1681 Glu Thr Gln Asn Asn Cys Val Tyr Ser Ile Ser Phe Asp Tyr Thr Cys
1682             340                 345                 350
1685 Ser Lys Glu Tyr Thr Gly Met Gln Phe Asp Val Thr Ser Phe Thr Phe
1686         355                 360                 365
1689 Ser Tyr Ile Ala Gln Glu
1690     370
1692 <210> SEQ ID NO: 40
1693 <211> LENGTH: 343
1694 <212> TYPE: PRT
1695 <213> ORGANISM: adenoviridae
1697 <220> FEATURE:
1698 <221> NAME/KEY: VARIANT
1699 <222> LOCATION: (1)..(343)
1700 <223> OTHER INFORMATION: Serotype 29 fiber protein
1702 <400> SEQUENCE: 40
1704 Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe
E--> 1705
                 1                   5                  10                  15
```

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Input Set : A:\Sequence Listing.txt
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```
     1708 Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile
E--> 1709             20                  25                  30
     1712 Ala Ile Thr Asn Gly Asp Val Ser Leu Lys Val Gly Gly Gly Leu Thr
E--> 1713         35                  40                  45
     1716 Val Glu Gln Asp Ser Gly Asn Leu Ser Val Asn Pro Lys Ala Pro Leu
E--> 1717     50                  55                  60
     1720 Gln Val Gly Thr Asp Lys Lys Leu Glu Leu Ala Leu Ala Pro Pro Phe
E--> 1721 65                  70                  75                  80
     1724 Asp Val Arg Asp Asn Lys Leu Ala Ile Leu Val Gly Asp Gly Leu Lys
E--> 1725                 85                  90                  95
     1728 Val Ile Asp Arg Ser Ile Ser Asp Leu Pro Gly Leu Leu Asn Tyr Leu
E--> 1729             100                 105                 110
     1732 Val Val Leu Thr Gly Lys Gly Ile Gly Asn Glu Glu Leu Lys Asn Asp
E--> 1733         115                 120                 125
     1736 Asp Gly Ser Asn Lys Gly Val Gly Leu Cys Val Arg Ile Gly Glu Gly
E--> 1737     130                 135                 140
     1740 Gly Gly Leu Thr Phe Asp Asp Lys Gly Tyr Leu Val Ala Trp Asn Asn
E--> 1741 145                 150                 155                 160
     1744 Lys His Asp Ile Arg Thr Leu Trp Thr Thr Leu Asp Pro Ser Pro Asn
E--> 1745                 165                 170                 175
     1748 Cys Lys Ile Asp Ile Glu Lys Asp Ser Lys Leu Thr Leu Val Leu Thr
E--> 1749             180                 185                 190
     1752 Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Ile Ile Val Asn
E--> 1753         195                 200                 205
     1756 Gly Lys Phe Lys Ile Leu Asn Asn Lys Thr Asp Pro Ser Leu Pro Lys
E--> 1757     210                 215                 220
     1760 Ser Phe Asn Ile Lys Leu Leu Phe Asp Gln Asn Gly Val Leu Leu Glu
E--> 1761 225                 230                 235                 240
     1764 Asn Ser Asn Ile Glu Lys Gln Tyr Leu Asn Phe Arg Ser Gly Asp Ser
E--> 1765                 245                 250                 255
     1768 Ile Leu Pro Glu Pro Tyr Lys Asn Ala Ile Gly Phe Met Pro Asn Leu
E--> 1769             260                 265                 270
     1772 Leu Ala Tyr Ala Lys Ala Thr Thr Asp Gln Ser Lys Ile Tyr Ala Arg
E--> 1773         275                 280                 285
     1776 Asn Thr Ile Tyr Gly Asn Ile Tyr Leu Asp Asn Gln Pro Tyr Asn Pro
E--> 1777     290                 295                 300
     1780 Val Val Ile Lys Ile Thr Phe Asn Asn Glu Ala Asp Ser Ala Tyr Ser
E--> 1781 305                 310                 315                 320
     1784 Ile Thr Phe Asn Tyr Ser Trp Thr Lys Asp Tyr Asp Asn Ile Pro Phe
E--> 1785                 325                 330                 335
     1788 Asp Ser Thr Ser Phe Thr Ser
E--> 1789             340
     1791 <210> SEQ ID NO: 41
     1792 <211> LENGTH: 386
     1793 <212> TYPE: PRT
     1794 <213> ORGANISM: adenoviridae
     1796 <220> FEATURE:
     1797 <221> NAME/KEY: VARIANT
     1798 <222> LOCATION: (1)..(386)
```

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Input Set : A:\Sequence Listing.txt
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1799 <223> OTHER INFORMATION: Serotype 30 fiber protein
1801 <220> FEATURE:
1802 <221> NAME/KEY: MISC_FEATURE
1803 <222> LOCATION: (23)
1804 <223> OTHER INFORMATION: 'Xaa' at position 23 indicates unidentified amino acid due
1805 to unidentified nucleotide(s)
1807 <220> FEATURE:
1808 <221> NAME/KEY: MISC_FEATURE
1809 <222> LOCATION: (43)
1810 <223> OTHER INFORMATION: 'Xaa' at position 43 indicates unidentified amino acid due
1811 to Unidentified nucleotide(s)
1813 <220> FEATURE:
1814 <221> NAME/KEY: MISC_FEATURE
1816 <222> LOCATION: (49)
1817 <223> OTHER INFORMATION: 'Xaa' at position 49 indicates unidentified amino acid due
1818 to unidentified nucleotide(s)
1820 <220> FEATURE:
1821 <221> NAME/KEY: MISC_FEATURE
1822 <222> LOCATION: (97)
1823 <223> OTHER INFORMATION: 'Xaa' at position 97 indicates unidentified amino acid due
1824 to unidentified nucleotide(s)
1826 <220> FEATURE:
1827 <221> NAME/KEY: MISC_FEATURE
1828 <222> LOCATION: (152)
1829 <223> OTHER INFORMATION: 'Xaa' at position 152 indicates unidentified amino acid
1830 due to unidentified nucleotide(s)
1832 <220> FEATURE:
1833 <221> NAME/KEY: MISC_FEATURE
1834 <222> LOCATION: (186).(786) ? only 186 amino acids in the sequence
1835 <223> OTHER INFORMATION: 'Xaa' at position 186 indicates unidentified amino acid
1836 due to unidentified nucleotide(s)
1838 <400> SEQUENCE: 41
1840 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 1841 1 5 10 15
W--> 1844 Lys Arg Ala Arg Pro Ser Xaa Asp Thr Phe Asn Pro Val Tyr Pro Tyr
E--> 1845 20 25 30
W--> 1848 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Xaa Thr Pro Pro Phe Val
E--> 1849 35 40 45
W--> 1852 Xaa Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
E--> 1853 50 55 60
1856 Leu Ala Asp Pro Ile Ala Ile Thr Asn Gly Asp Val Ser Leu Lys Val
E--> 1857 65 70 75 80
1860 Gly Gly Gly Leu Thr Val Glu Gln Asp Ser Gly Asn Leu Ser Val Asn
E--> 1861 85 90 95
W--> 1864 Xaa Lys Ala Pro Leu Gln Val Gly Thr Asp Lys Lys Leu Glu Leu Ala
E--> 1865 100 105 110
1868 Leu Ala Pro Pro Phe Asp Val Arg Asp Asn Lys Leu Ala Ile Leu Val
E--> 1869 115 120 125
1872 Gly Asp Gly Leu Lys Val Ile Asp Arg Ser Ile Ser Asp Leu Pro Gly

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Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
E--> 1873     130                 135                 140
W--> 1876 Leu Leu Asn Tyr Leu Val Val Xaa Thr Gly Lys Gly Ile Gly Asn Glu
E--> 1877 145                 150                 155                 160
     1880 Glu Leu Lys Asn Asp Asp Gly Ser Asn Lys Gly Val Gly Leu Cys Val
E--> 1881                 165                 170                 175
W--> 1884 Arg Ile Gly Glu Gly Gly Gly Leu Thr Xaa Asp Asp Lys Gly Tyr Leu
E--> 1885             180                 185                 190
     1888 Val Ala Trp Asn Asn Lys His Asp Ile Arg Thr Leu Trp Thr Thr Leu
E--> 1889         195                 200                 205
     1892 Asp Pro Ser Pro Asn Cys Lys Ile Asp Ile Glu Lys Asp Ser Lys Leu
E--> 1893     210                 215                 220
     1896 Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser
E--> 1897 225                 230                 235                 240
     1900 Leu Ile Ile Val Asn Gly Lys Phe Lys Ile Leu Asn Asn Lys Thr Asp
E--> 1901                 245                 250                 255
     1904 Pro Ser Leu Pro Lys Ser Phe Asn Ile Lys Leu Leu Phe Asp Gln Asn
E--> 1905             260                 265                 270
     1908 Gly Val Leu Leu Glu Asn Ser Asn Ile Glu Lys Gln Tyr Leu Asn Phe
E--> 1909         275                 280                 285
     1912 Arg Ser Gly Asp Ser Ile Leu Pro Glu Pro Tyr Lys Asn Ala Ile Gly
E--> 1913     290                 295                 300
     1916 Phe Met Pro Asn Leu Leu Ala Tyr Ala Lys Ala Thr Thr Asp Gln Ser
E--> 1917 305                 310                 315                 320
     1920 Lys Ile Tyr Ala Arg Asn Thr Ile Tyr Gly Asn Ile Tyr Leu Asp Asn
E--> 1921                 325                 330                 335
     1924 Gln Pro Tyr Asn Pro Val Val Ile Lys Ile Thr Phe Asn Asn Glu Ala
E--> 1925             340                 345                 350
     1928 Asp Ser Ala Tyr Ser Ile Thr Phe Asn Tyr Ser Trp Thr Lys Asp Tyr
E--> 1929         355                 360                 365
     1932 Asp Asn Ile Pro Phe Asp Ser Thr Ser Phe Thr Phe Ser Tyr Ile Ala
E--> 1933     370                 375                 380
     1936 Gln Glu
E--> 1937 385
     1939 <210> SEQ ID NO: 42
     1940 <211> LENGTH: 391
     1941 <212> TYPE: PRT
     1942 <213> ORGANISM: adenoviridae
     1944 <220> FEATURE:
     1945 <221> NAME/KEY: VARIANT
     1946 <222> LOCATION: (1)..(391)
     1947 <223> OTHER INFORMATION: Serotype 32 fiber protein
     1949 <400> SEQUENCE: 42
     1951 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 1952
                                  1                   5                  10                  15
     1955 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
E--> 1956             20                  25                  30
     1959 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
E--> 1960         35                  40                  45
     1963 Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
```

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Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
E--> 1964     50                  55                  60
     1967 Leu Ala Asp Pro Ile Thr Ile Ala Asn Gly Asn Val Ser Leu Lys Val
E--> 1968 65                  70                  75                  80
     1971 Gly Gly Gly Leu Thr Leu Glu Gln Asp Ser Gly Lys Leu Ile Val Asn
E--> 1972                  85                  90                  95
     1975 Pro Lys Ala Pro Leu Gln Val Ala Asn Asp Lys Leu Glu Leu Ser Tyr
E--> 1976             100                 105                 110
     1979 Ala Asp Pro Phe Glu Thr Ser Ala Asn Lys Leu Ser Leu Lys Val Gly
E--> 1980         115                 120                 125
     1983 His Gly Leu Lys Val Leu Asp Glu Lys Asn Ala Gly Gly Leu Lys Asp
E--> 1984     130                 135                 140
     1987 Leu Ile Gly Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Val Glu
E--> 1988 145                 150                 155                 160
     1991 Glu Leu Lys Asn Ala Asp Asn Thr Asn Arg Gly Val Gly Ile Asn Val
E--> 1992                  165                 170                 175
     1995 Arg Leu Gly Lys Asp Gly Gly Leu Ser Phe Asp Lys Lys Gly Asp Leu
E--> 1996             180                 185                 190
     1999 Val Ala Trp Asn Lys His Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro
E--> 2000         195                 200                 205
     2003 Asp Pro Ser Pro Asn Cys Thr Ile Asp Glu Glu Arg Asp Ser Lys Leu
E--> 2004     210                 215                 220
     2007 Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser
E--> 2008 225                 230                 235                 240
     2011 Leu Leu Val Val Lys Gly Lys Phe Ser Asn Ile Asn Asn Asn Thr Asn
E--> 2012                  245                 250                 255
     2015 Pro Thr Asp Lys Lys Ile Thr Val Lys Leu Leu Phe Asn Glu Lys Gly
E--> 2016             260                 265                 270
     2019 Val Leu Met Asp Ser Ser Ser Leu Lys Lys Glu Tyr Trp Asn Tyr Arg
E--> 2020         275                 280                 285
     2023 Asn Asp Asn Ser Thr Val Ser Gln Ala Tyr Asp Asn Ala Val Pro Phe
E--> 2024     290                 295                 300
     2027 Met Pro Asn Ile Lys Ala Tyr Pro Lys Pro Thr Thr Asp Thr Ser Ala
E--> 2028 305                 310                 315                 320
     2031 Lys Pro Glu Asp Lys Lys Ser Ala Ala Lys Arg Tyr Ile Val Ser Asn
E--> 2032                  325                 330                 335
     2035 Val Tyr Ile Gly Gly Leu Pro Asp Lys Thr Val Val Ile Thr Ile Lys
E--> 2036             340                 345                 350
     2039 Leu Asn Ala Glu Thr Glu Ser Ala Tyr Ser Met Thr Phe Glu Phe Thr
E--> 2040         355                 360                 365
     2043 Trp Ala Lys Thr Phe Glu Asn Leu Gln Phe Asp Ser Ser Ser Phe Thr
E--> 2044     370                 375                 380
     2047 Phe Ser Tyr Ile Ala Gln Glu
E--> 2048 385                 390
     2050 <210> SEQ ID NO: 43
     2051 <211> LENGTH: 391
     2052 <212> TYPE: PRT
     2053 <213> ORGANISM: adenoviridae
     2055 <220> FEATURE:
     2056 <221> NAME/KEY: VARIANT
```

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Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

2057 <222> LOCATION: (1)..(391)
2058 <223> OTHER INFORMATION: Serotype 33 fiber protein
2060 <400> SEQUENCE: 43
2062 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 2063
1 5 10
2066 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
2067 20 25 30
2070 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
2071 35 40 45
2074 Ser Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
2075 50 55 60
2078 Leu Ala Asp Pro Ile Thr Ile Thr Asn Gly Asp Val Ser Leu Lys Val
2079 65 70 75 80
2082 Gly Gly Gly Leu Thr Leu Gln Glu Gly Ser Leu Thr Val Asn Pro Lys
2083 85 90 95
2086 Ala Pro Leu Gln Leu Ala Asn Asp Lys Lys Leu Glu Leu Val Tyr Asp
2087 100 105 110
2090 Asp Pro Phe Glu Val Ser Thr Asn Lys Leu Ser Leu Lys Val Gly His
2091 115 120 125
2094 Gly Leu Lys Val Leu Asp Asp Lys Ser Ala Gly Gly Leu Gln Asp Leu
2095 130 135 140
2098 Ile Gly Lys Leu Val Val Leu Thr Gly Lys Gly Ile Gly Ile Glu Asn
2099 145 150 155 160
2102 Leu Gln Asn Asp Asp Gly Ser Ser Arg Gly Val Gly Ile Asn Val Arg
2103 165 170 175
2106 Leu Gly Thr Asp Gly Gly Leu Ser Phe Asp Arg Lys Gly Glu Leu Val
2107 180 185 190
2110 Ala Trp Asn Arg Lys Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp
2111 195 200 205
2114 Pro Ser Pro Asn Cys Lys Ala Glu Thr Glu Lys Asp Ser Lys Leu Thr
2115 210 215 220
2118 Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Thr Val Ser Ile
2119 225 230 235 240
2122 Ile Val Leu Lys Gly Lys Tyr Glu Phe Val Lys Lys Glu Thr Glu Pro
2123 245 250 255
2126 Lys Ser Phe Asp Val Lys Leu Leu Phe Asp Ser Lys Gly Val Leu Leu
2127 260 265 270
2130 Pro Thr Ser Asn Leu Ser Lys Glu Tyr Trp Asn Tyr Arg Ser Tyr Asp
2131 275 280 285
2134 Asn Asn Ile Gly Thr Pro Tyr Glu Asn Ala Val Pro Phe Met Pro Asn
2135 290 295 300
2138 Leu Lys Ala Tyr Pro Lys Pro Thr Lys Thr Ala Ser Asp Lys Ala Glu
2139 305 310 315 320
2142 Asn Lys Ile Ser Ser Ala Lys Asn Lys Ile Val Ser Asn Phe Tyr Phe
2143 325 330 335
2146 Gly Gly Gln Ala Tyr Gln Pro Gly Thr Ile Ile Ile Lys Phe Asn Glu
2147 340 345 350
2150 Glu Ile Asp Glu Thr Cys Ala Tyr Ser Ile Thr Phe Asn Phe Gly Trp
2151 355 360 365

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
2154 Gly Lys Val Tyr Asp Asn Pro Phe Pro Phe Asp Thr Thr Ser Phe Thr
2155     370                 375                 380
2158 Phe Ser Tyr Ile Ala Gln Glu
2159 385                 390
2161 <210> SEQ ID NO: 44
2162 <211> LENGTH: 338
2163 <212> TYPE: PRT
2164 <213> ORGANISM: adenoviridae
2166 <220> FEATURE:
2167 <221> NAME/KEY: VARIANT
2168 <222> LOCATION: (1)..(338)
2169 <223> OTHER INFORMATION: Serotype 34 fiber protein
2171 <400> SEQUENCE: 44
2173 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 2174                                   1               5                  10
2177 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
2178             20                  25                  30
2181 Glu Asp Glu Ser Thr Ser Gln His Pro Phe Ile Asn Pro Gly Phe Ile
2182         35                  40                  45
2185 Ser Pro Asn Gly Phe Thr Gln Ser Pro Asp Gly Val Leu Thr Leu Lys
2186     50                  55                  60
2189 Cys Leu Thr Pro Leu Thr Thr Thr Gly Gly Ser Leu Gln Leu Lys Val
2190 65                  70                  75                  80
2193 Gly Gly Gly Leu Thr Val Asp Asp Thr Asp Gly Thr Leu Gln Lys Asn
2194                 85                  90                  95
2197 Ile Arg Ala Thr Thr Pro Ile Thr Lys Asn Asn His Ser Val Glu Leu
2198             100                 105                 110
2201 Thr Ile Gly Asn Gly Leu Glu Thr Gln His Asn Lys Leu Cys Ala Lys
2202         115                 120                 125
2205 Leu Gly Asn Gly Leu Lys Phe Asn Asn Gly Asp Ile Cys Ile Lys Asp
2206     130                 135                 140
2209 Ser Ile Asn Thr Leu Trp Thr Gly Ile Asn Pro Pro Pro Asn Cys Gln
2210 145                 150                 155                 160
2213 Ile Val Glu Asn Thr Asn Thr Asn Asp Gly Lys Leu Thr Leu Val Leu
2214                 165                 170                 175
2217 Val Lys Asn Gly Gly Leu Val Asn Gly Tyr Val Ser Leu Val Gly Val
2218             180                 185                 190
2221 Ser Asp Thr Val Asn Gln Met Phe Thr Gln Lys Thr Ala Asn Ile Gln
2222         195                 200                 205
2225 Leu Arg Leu Tyr Phe Asp Ser Ser Gly Asn Leu Leu Thr Asp Glu Ser
2226     210                 215                 220
2229 Asp Leu Lys Ile Pro Leu Lys Asn Lys Ser Ser Thr Ala Thr Ser Glu
2230 225                 230                 235                 240
2233 Thr Val Ala Ser Ser Lys Ala Phe Met Pro Ser Thr Thr Ala Tyr Pro
2234                 245                 250                 255
2237 Phe Asn Thr Thr Thr Arg Asp Ser Glu Asn Tyr Ile His Gly Ile Cys
2238             260                 265                 270
2241 Tyr Tyr Met Thr Ser Tyr Asp Arg Ser Leu Phe Pro Leu Asn Ile Ser
2242         275                 280                 285
```

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
2245 Ile Met Leu Asn Ser Arg Met Ile Ser Ser Asn Val Ala Tyr Ala Ile
2246     290                 295                 300
2249 Gln Phe Glu Trp Asn Leu Asn Ala Ser Glu Ser Pro Glu Lys Gln His
2250 305                 310                 315                 320
2253 Met Thr Leu Thr Thr Ser Pro Phe Phe Phe Ser Tyr Ile Ile Glu Asp
2254                 325                 330                 335
2257 Asp Asn
2259 <210> SEQ ID NO: 45
2260 <211> LENGTH: 338
2261 <212> TYPE: PRT
2262 <213> ORGANISM: adenoviridae
2264 <220> FEATURE:
2265 <221> NAME/KEY: VARIANT
2267 <222> LOCATION: (1)..(338)
2268 <223> OTHER INFORMATION: Serotype 35 fiber protein
2270 <400> SEQUENCE: 45
2272 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 2273                                   1               5                  10
2276 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
2277             20                  25                  30
2280 Glu Asp Glu Ser Thr Ser Gln His Pro Phe Ile Asn Pro Gly Phe Ile
2281         35                  40                  45
2284 Ser Pro Asn Gly Phe Thr Gln Ser Pro Asp Gly Val Leu Thr Leu Lys
2285     50                  55                  60
2288 Cys Leu Thr Pro Leu Thr Thr Thr Gly Gly Ser Leu Gln Leu Lys Val
2289 65                  70                  75                  80
2292 Gly Gly Gly Leu Thr Val Asp Asp Thr Asp Gly Thr Leu Gln Glu Asn
2293                 85                  90                  95
2296 Ile Arg Ala Thr Ala Pro Ile Thr Lys Asn Asn His Ser Val Glu Leu
2297             100                 105                 110
2300 Ser Ile Gly Asn Gly Leu Glu Thr Gln Asn Asn Lys Leu Cys Ala Lys
2301         115                 120                 125
2304 Leu Gly Asn Gly Leu Lys Phe Asn Asn Gly Asp Ile Cys Ile Lys Asp
2305     130                 135                 140
2308 Ser Ile Asn Thr Leu Trp Thr Gly Ile Asn Pro Pro Pro Asn Cys Gln
2309 145                 150                 155                 160
2312 Ile Val Glu Asn Thr Asn Thr Asn Asp Gly Lys Leu Thr Leu Val Leu
2313                 165                 170                 175
2316 Val Lys Asn Gly Gly Leu Val Asn Gly Tyr Val Ser Leu Val Gly Val
2317             180                 185                 190
2320 Ser Asp Thr Val Asn Gln Met Phe Thr Gln Lys Thr Ala Asn Ile Gln
2321         195                 200                 205
2324 Leu Arg Leu Tyr Phe Asp Ser Ser Gly Asn Leu Leu Thr Glu Glu Ser
2325     210                 215                 220
2328 Asp Leu Lys Ile Pro Leu Lys Asn Lys Ser Ser Thr Ala Thr Ser Glu
2329 225                 230                 235                 240
2332 Thr Val Ala Ser Ser Lys Ala Phe Met Pro Ser Thr Thr Ala Tyr Pro
2333                 245                 250                 255
2336 Phe Asn Thr Thr Thr Arg Asp Ser Glu Asn Tyr Ile His Gly Ile Cys
```

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
2337              260                 265                 270
2340 Tyr Tyr Met Thr Ser Tyr Asp Arg Ser Leu Phe Pro Leu Asn Ile Ser
2341          275                 280                 285
2344 Ile Met Leu Asn Ser Arg Met Ile Ser Ser Asn Val Ala Tyr Ala Ile
2345      290                 295                 300
2348 Gln Phe Glu Trp Asn Leu Asn Ala Ser Glu Ser Pro Glu Ser Asn Ile
2349 305                 310                 315                 320
2352 Met Thr Leu Thr Thr Ser Pro Phe Phe Phe Ser Tyr Ile Thr Glu Asp
2353                 325                 330                 335
2356 Asp Asn
2358 <210> SEQ ID NO: 46
2359 <211> LENGTH: 392
2360 <212> TYPE: PRT
2361 <213> ORGANISM: adenoviridae
2363 <220> FEATURE:
2364 <221> NAME/KEY: VARIANT
2365 <222> LOCATION: (1)..(392)
2366 <223> OTHER INFORMATION: Serotype 36 fiber protein
2368 <400> SEQUENCE: 46
2370 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 2371                    1                   5                  10                  15
2374 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
E--> 2375              20                  25                  30
2378 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
E--> 2379          35                  40                  45
2382 Ser Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
E--> 2383      50                  55                  60
2386 Leu Ala Asp Pro Ile Ala Ile Val Asn Gly Asp Val Ser Leu Lys Val
E--> 2387 65                  70                  75                  80
2390 Gly Gly Gly Leu Thr Val Glu Gln Asp Ser Gly Lys Leu Lys Val Asn
E--> 2391                  85                  90                  95
2394 Pro Lys Ile Pro Leu Gln Val Val Asn Asp Gln Leu Glu Leu Ala Thr
E--> 2395              100                 105                 110
2398 Asp Lys Pro Phe Lys Ile Glu Asn Asn Lys Leu Ala Leu Asp Val Gly
E--> 2399          115                 120                 125
2402 His Gly Leu Lys Val Ile Asp Lys Thr Ile Ser Asp Leu Gln Gly Leu
E--> 2403      130                 135                 140
2406 Val Gly Lys Leu Val Val Leu Thr Gly Val Gly Ile Gly Thr Glu Thr
E--> 2407 145                 150                 155                 160
2410 Leu Lys Asp Lys Asn Asp Lys Val Ile Gly Ser Ala Val Asn Val Arg
E--> 2411                  165                 170                 175
2414 Leu Gly Lys Asp Gly Gly Leu Asp Phe Asn Lys Lys Gly Asp Leu Val
E--> 2415              180                 185                 190
2418 Ala Trp Asn Arg Tyr Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp
E--> 2419          195                 200                 205
2422 Pro Ser Pro Asn Cys Lys Val Ser Glu Ala Lys Asp Ser Lys Leu Thr
E--> 2423      210                 215                 220
2426 Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Ser Val Ala Leu
E--> 2427 225                 230                 235                 240
```

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
     2430 Leu Ile Val Lys Gly Lys Tyr Gln Thr Ile Ser Glu Ser Thr Ile Pro
E--> 2431                 245                 250                 255
     2434 Lys Asp Gln Arg Asn Phe Ser Val Lys Leu Met Phe Asp Glu Lys Gly
E--> 2435             260                 265                 270
     2438 Lys Leu Leu Asp Lys Ser Ser Leu Asp Lys Glu Tyr Trp Asn Phe Arg
E--> 2439         275                 280                 285
     2442 Ser Asn Asp Ser Val Val Gly Thr Ala Tyr Asp Asn Ala Val Pro Phe
E--> 2443     290                 295                 300
     2446 Met Pro Asn Leu Lys Ala Tyr Pro Lys Asn Thr Thr Thr Ser Ser Thr
E--> 2447 305                 310                 315                 320
     2450 Asn Pro Asp Asp Lys Ile Ser Ala Gly Lys Lys Asn Ile Val Ser Asn
E--> 2451                 325                 330                 335
     2454 Val Tyr Leu Glu Gly Arg Val Tyr Gln Pro Val Ala Leu Thr Val Lys
E--> 2455             340                 345                 350
     2458 Phe Asn Ser Glu Asn Asp Cys Ala Tyr Ser Ile Thr Phe Asp Phe Val
E--> 2459         355                 360                 365
     2462 Trp Ser Lys Thr Tyr Glu Ser Pro Val Ala Phe Asp Ser Ser Ser Phe
E--> 2463     370                 375                 380
     2466 Thr Phe Ser Tyr Ile Ala Gln Glu
E--> 2467 385                 390
     2469 <210> SEQ ID NO: 47
     2470 <211> LENGTH: 380
     2471 <212> TYPE: PRT
     2472 <213> ORGANISM: adenoviridae
     2474 <220> FEATURE:
     2475 <221> NAME/KEY: VARIANT
     2476 <222> LOCATION: (1)..(380)
     2477 <223> OTHER INFORMATION: Serotype 37 fiber protein
     2479 <400> SEQUENCE: 47
     2481 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 2482                                    1                   5                  10
     2485 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
     2486             20                  25                  30
     2489 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
     2490         35                  40                  45
     2493 Ser Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
     2494     50                  55                  60
     2497 Leu Ala Asp Pro Ile Thr Ile Thr Asn Gly Asp Val Ser Leu Lys Val
     2498 65                  70                  75                  80
     2501 Gly Gly Gly Leu Thr Leu Gln Asp Gly Ser Leu Thr Val Asn Pro Lys
     2502                 85                  90                  95
     2505 Ala Pro Leu Gln Val Asn Thr Asp Lys Lys Leu Glu Leu Ala Tyr Asp
     2506             100                 105                 110
     2509 Asn Pro Phe Glu Ser Ser Ala Asn Lys Leu Ser Leu Lys Val Gly His
     2510         115                 120                 125
     2513 Gly Leu Lys Val Leu Asp Glu Lys Ser Ala Ala Gly Leu Lys Asp Leu
     2514     130                 135                 140
     2517 Ile Gly Lys Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Glu Asn
     2518 145                 150                 155                 160
```

```
2521 Leu Glu Asn Thr Asp Gly Ser Ser Arg Gly Ile Gly Ile Asn Val Arg
2522                 165                 170                 175
2525 Ala Arg Glu Gly Leu Thr Phe Asp Asn Asp Gly Tyr Leu Val Ala Trp
2526             180                 185                 190
2529 Asn Pro Lys Tyr Asp Leu Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser
2530         195                 200                 205
2533 Pro Asn Cys Thr Ile Ala Gln Asp Lys Asp Ser Lys Leu Thr Leu Val
2534     210                 215                 220
2537 Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Ile Val
2538 225                 230                 235                 240
2541 Val Ala Gly Lys Tyr His Ile Ile Asn Asn Lys Thr Asn Pro Lys Ile
2542                 245                 250                 255
2545 Lys Ser Phe Thr Ile Lys Leu Leu Phe Asn Lys Asn Gly Val Leu Leu
2546             260                 265                 270
2549 Asp Asn Ser Asn Leu Gly Lys Ala Tyr Trp Asn Phe Arg Ser Gly Asn
2550         275                 280                 285
2553 Ser Asn Val Ser Thr Ala Tyr Glu Lys Ala Ile Gly Phe Met Pro Asn
2554     290                 295                 300
2557 Leu Val Ala Val Ser Lys Pro Ser Asn Ser Lys Lys Tyr Ala Arg Asp
2558 305                 310                 315                 320
2561 Ile Val Tyr Gly Asn Ile Tyr Leu Gly Gly Lys Pro Asp Gln Pro Gly
2562                 325                 330                 335
2565 Val Ile Lys Thr Thr Phe Asn Gln Glu Thr Gly Cys Glu Tyr Ser Ile
2566             340                 345                 350
2569 Thr Phe Asn Phe Ser Trp Ser Lys Thr Tyr Glu Asn Val Glu Phe Glu
2570         355                 360                 365
2573 Thr Thr Ser Phe Thr Phe Ser Tyr Ile Ala Gln Glu
2574     370                 375                 380
2576 <210> SEQ ID NO: 48
2577 <211> LENGTH: 391
2578 <212> TYPE: PRT
2579 <213> ORGANISM: adenoviridae
2581 <220> FEATURE:
2582 <221> NAME/KEY: VARIANT
2583 <222> LOCATION: (1)..(391)
2584 <223> OTHER INFORMATION: Serotype 39 fiber protein
2586 <220> FEATURE:
2587 <221> NAME/KEY: MISC_FEATURE
2588 <222> LOCATION: (43)
2589 <223> OTHER INFORMATION: 'Xaa' at position 43 indicates an unidentified amino acid
2590       due to unidentified nucleotide(s)
2592 <220> FEATURE:
2593 <221> NAME/KEY: MISC_FEATURE
2594 <222> LOCATION: (49)
2595 <223> OTHER INFORMATION: 'Xaa' at position 49 indicates an unidentified amino acid
2596       due to unidentified nucleotide(s)
2598 <220> FEATURE:
2599 <221> NAME/KEY: MISC_FEATURE
2600 <222> LOCATION: (97)
```

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```
2601 <223> OTHER INFORMATION: 'Xaa' at position 97 indicates an unidentified amino acid
2602       due to unidentified nucleotide(s)
2604 <220> FEATURE:
2605 <221> NAME/KEY: MISC_FEATURE
2606 <222> LOCATION: (192)
2607 <223> OTHER INFORMATION: 'Xaa' at position 192 indicates an unidentified amino acid
2608       due to unidentified nucleotide(s)
2610 <400> SEQUENCE: 48
2612 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 2613                                   1               5                  10
2616 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
2617             20                  25                  30
W--> 2620 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Xaa Thr Pro Pro Phe Val
2621         35                  40                  45
W--> 2624 Xaa Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
2625      50                  55                  60
2628 Leu Ala Asp Pro Ile Thr Ile Ala Asn Gly Asn Val Ser Leu Lys Val
2629 65                  70                  75                  80
2632 Gly Gly Gly Leu Thr Leu Glu Gln Asp Ser Gly Lys Leu Ile Val Asn
2633                 85                  90                  95
W--> 2636 Xaa Lys Ala Pro Leu Gln Val Ala Asn Asp Lys Leu Glu Leu Ser Tyr
2637             100                 105                 110
2640 Ala Asp Pro Phe Glu Thr Ser Ala Asn Lys Leu Ser Leu Lys Val Gly
2641         115                 120                 125
2644 His Gly Leu Lys Val Leu Asp Glu Lys Asn Ala Gly Gly Leu Lys Asp
2645     130                 135                 140
2648 Leu Ile Gly Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Val Glu
2649 145                 150                 155                 160
2652 Glu Leu Lys Asn Ala Asp Asn Thr Asn Arg Gly Val Gly Ile Asn Val
2653                 165                 170                 175
W--> 2656 Arg Leu Gly Lys Asp Gly Gly Leu Ser Phe Asp Lys Lys Gly Asp Xaa
2657             180                 185                 190
2660 Val Ala Trp Asn Lys His Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro
2661         195                 200                 205
2664 Asp Pro Ser Pro Asn Cys Thr Ile Asp Glu Glu Arg Asp Ser Lys Leu
2665     210                 215                 220
2668 Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser
2669 225                 230                 235                 240
2672 Leu Leu Val Val Lys Gly Lys Phe Ser Asn Ile Asn Asn Asn Thr Asn
2673                 245                 250                 255
2676 Pro Thr Asp Lys Lys Ile Thr Val Lys Leu Leu Phe Asn Glu Lys Gly
2677             260                 265                 270
2680 Val Leu Met Asp Ser Ser Ser Leu Lys Lys Glu Tyr Trp Asn Tyr Arg
2681         275                 280                 285
2684 Asn Asp Asn Ser Thr Val Ser Gln Ala Tyr Asp Asn Ala Val Pro Phe
2685     290                 295                 300
2688 Met Pro Asn Ile Lys Ala Tyr Pro Lys Pro Thr Thr Asp Thr Ser Ala
2689 305                 310                 315                 320
2692 Lys Pro Glu Asp Lys Lys Ser Ala Ala Lys Arg Tyr Ile Val Ser Asn
```

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
2693                 325                 330                 335
2696 Val Tyr Ile Gly Gly Leu Pro Asp Lys Thr Val Val Ile Thr Ile Lys
2697             340                 345                 350
2700 Leu Asn Ala Glu Thr Glu Ser Ala Tyr Ser Met Thr Phe Glu Phe Thr
2701         355                 360                 365
2704 Trp Ala Lys Thr Phe Glu Asn Leu Gln Phe Asp Ser Ser Ser Phe Thr
2705     370                 375                 380
2708 Phe Ser Tyr Ile Ala Gln Glu
2709 385                 390
2711 <210> SEQ ID NO: 49
2712 <211> LENGTH: 339
2713 <212> TYPE: PRT
2714 <213> ORGANISM: adenoviridae
2716 <220> FEATURE:
2717 <221> NAME/KEY: VARIANT
2718 <222> LOCATION: (1)..(339)
2719 <223> OTHER INFORMATION: Serotype 39 fiber protein
2721 <400> SEQUENCE: 49
2723 Ile Arg Ile Ser Pro Ser Ser Leu Pro Pro Leu Ser Pro Pro Met Asp
E--> 2724
                                    1                   5                  10
2727 Ser Lys Thr Ser Pro Leu Gly Cys Tyr His Ser Asn Trp Leu Thr Gln
2728             20                  25                  30
2731 Ser Pro Ser Pro Met Gly Met Ser His Ser Arg Trp Glu Gly Gly Ser
2732         35                  40                  45
2735 Pro Trp Gln Glu Gly Thr Gly Asp Leu Lys Val Asn Ala Lys Ser Pro
2736     50                  55                  60
2739 Leu Gln Val Ala Thr Asn Lys Gln Leu Glu Ile Ala Leu Ala Lys Pro
2740 65                  70                  75                  80
2743 Phe Glu Glu Lys Asp Gly Lys Leu Ala Leu Lys Ile Gly His Gly Leu
2744                 85                  90                  95
2747 Ala Val Val Asp Glu Asn His Thr His Leu Gln Ser Leu Ile Gly Thr
2748             100                 105                 110
2751 Leu Val Ile Leu Thr Gly Lys Gly Ile Gly Thr Gly Arg Ala Glu Ser
2752         115                 120                 125
2755 Gly Gly Thr Ile Asp Val Arg Leu Gly Ser Gly Gly Gly Leu Ser Phe
2756     130                 135                 140
2759 Asp Lys Asp Gly Asn Leu Val Ala Trp Asn Lys Asp Asp Asp Arg Arg
2760 145                 150                 155                 160
2763 Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn Cys Lys Ile Asp Gln
2764                 165                 170                 175
2767 Asp Lys Asp Ser Lys Leu Thr Phe Val Leu Thr Lys Cys Gly Ser Gln
2768             180                 185                 190
2771 Ile Leu Ala Asn Met Ser Leu Leu Val Val Lys Gly Lys Phe Ser Met
2772         195                 200                 205
2775 Ile Asn Asn Lys Val Asn Gly Thr Asp Asp Tyr Lys Lys Phe Thr Ile
2776     210                 215                 220
2779 Lys Leu Leu Phe Asp Glu Lys Gly Val Leu Leu Lys Asp Ser Ser Leu
2780 225                 230                 235                 240
2783 Asp Lys Glu Tyr Trp Asn Tyr Arg Ser Asn Asn Asn Asn Val Gly Ser
```

Use of n and/or Xaa has been detected in the Sequence Listing.
Review the Sequence Listing to insure a corresponding explanation is presented in the <220> to <223> fields of each sequence using n or Xaa.

The types of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

RAW SEQUENCE LISTING DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```
2784                 245                 250                 255
2787 Ala Tyr Glu Glu Ala Val Gly Phe Met Pro Ser Thr Thr Ala Tyr Pro
2788             260                 265                 270
2791 Lys Pro Pro Thr Pro Pro Thr Asn Pro Thr Thr Pro Leu Glu Lys Ser
2792         275                 280                 285
2795 Gln Ala Lys Asn Lys Tyr Val Ser Asn Val Tyr Leu Gly Gly Gln Ala
2796     290                 295                 300
2799 Gly Asn Pro Val Ala Thr Thr Val Ser Phe Asn Lys Glu Thr Gly Cys
2800 305                 310                 315                 320
2803 Thr Tyr Ser Ile Thr Phe Asp Phe Ala Trp Asn Lys Thr Tyr Glu Asn
2804                 325                 330                 335
2807 Val Gln Cys
```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:58

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

Invalid Line Length:
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:30; Line(s) 627,663
Seq#:31; Line(s) 735
Seq#:32; Line(s) 878
Seq#:33; Line(s) 989
Seq#:34; Line(s) 1077
Seq#:35; Line(s) 1176
Seq#:36; Line(s) 1276
Seq#:37; Line(s) 1393
Seq#:38; Line(s) 1500
Seq#:39; Line(s) 1597
Seq#:40; Line(s) 1705
Seq#:41; Line(s) 1841
Seq#:42; Line(s) 1952
Seq#:43; Line(s) 2063
Seq#:44; Line(s) 2174
Seq#:45; Line(s) 2273
Seq#:46; Line(s) 2371
Seq#:47; Line(s) 2482
Seq#:48; Line(s) 2613
Seq#:49; Line(s) 2724
Seq#:50; Line(s) 2828
Seq#:51; Line(s) 2947
Seq#:52; Line(s) 3042
Seq#:53; Line(s) 3141
Seq#:54; Line(s) 3240
Seq#:55; Line(s) 3339
Seq#:56; Line(s) 3450
Seq#:57; Line(s) 3555
Seq#:58; Line(s) 3666

VERIFICATION SUMMARY
PATENT APPLICATION: US/10/040,949

DATE: 09/18/2002
TIME: 14:46:58

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:69 M:283 W: Missing Blank Line separator, <220> field identifier
L:108 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:50 SEQ:5
L:627 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:30
M:332 Repeated in SeqNo=30
L:735 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:31
L:877 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0
L:878 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:32
L:881 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:16
L:885 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:32
L:889 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:48
L:973 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:384
L:989 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:33
L:1077 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:34
L:1176 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:35
L:1276 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:36
L:1393 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:37
L:1424 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:128
L:1500 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:38
L:1597 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:39
L:1705 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:40
M:332 Repeated in SeqNo=40
L:1841 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:41
L:1844 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:16
M:332 Repeated in SeqNo=41
L:1848 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:32
L:1852 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:48
L:1864 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:96
L:1876 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:144
L:1884 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:176
L:1952 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:42
M:332 Repeated in SeqNo=42
L:2063 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:43
L:2174 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:44
L:2273 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:45
L:2371 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:46
M:332 Repeated in SeqNo=46
L:2482 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:47
L:2613 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:48
L:2620 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:32
L:2624 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:48
L:2636 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:96
L:2656 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:176
L:2724 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:49
L:2828 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:50
M:332 Repeated in SeqNo=50
L:2883 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:224
L:2946 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:0

VERIFICATION SUMMARY DATE: 09/18/2002
PATENT APPLICATION: US/10/040,949 TIME: 14:46:58

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

L:2947 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:51
M:332 Repeated in SeqNo=51
L:3002 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:224
L:3042 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:52
M:332 Repeated in SeqNo=52
L:3141 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:53
M:332 Repeated in SeqNo=53
L:3240 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:54
M:332 Repeated in SeqNo=54
L:3339 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:55
M:332 Repeated in SeqNo=55
L:3450 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:56
L:3555 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:57
M:332 Repeated in SeqNo=57
L:3618 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57 after pos.:256
L:3666 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:58
M:332 Repeated in SeqNo=58

Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: 10/040,949

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1	Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
2	Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.
3 ✓	Misaligned Amino Numbering	The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
4	Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
5	Variable Length	Sequence(s)____contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
6	PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
7	Skipped Sequences (OLD RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
8	Skipped Sequences (NEW RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000
9	Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
10	Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
11	Use of <220>	Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
12	PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
13	Misuse of n	n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.